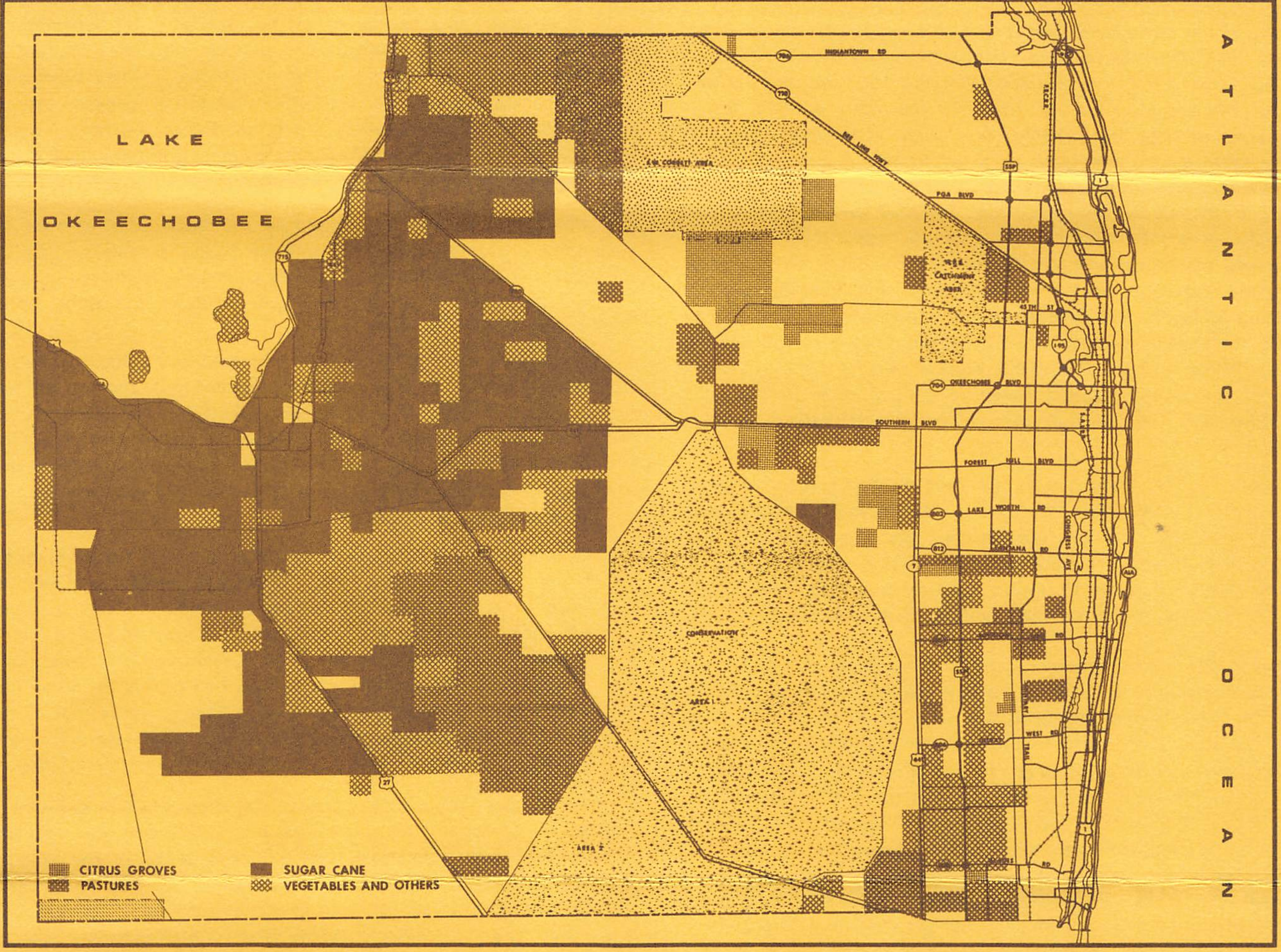
NEWSLETTER OF THE AREA PLANNING BOARD OF PALM BEACH COUNTY - P. O. BOX 1548 - WEST PALM BEACH, FLORIDA, 33402

apb FORUM

THE PREPARATION OF THIS REPORT WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED.

VOLUME 3, NUMBER 3

SEPTEMBER 1969



THE ROLE OF AGRICULTURE IN PALM BEACH COUNTY

Palm Beach County has a total of 1,265,920 acres of land, of which approximately 40 percent is currently being devoted to agricultural uses. During the production year of 1967-1968, the farm products which were derived from this land had a total value of 224 million dollars, or approximately 25 percent of the total personal income earned in the county.

Agriculture is unquestionably the mainstay of the Glades' economy. During 1967-68, 2,500 full-time, 13,000 migrant and 7,500 offshore workers earned 52 million dollars raising, harvesting, and processing the various crops. These wages were almost entirely spent in Palm Beach County with the exception of the earnings of the offshore workers who are required to have 50 percent of their pay returned to their home country.

Sugar cane is the single most valuable crop; the 173,114 acres harvested in 1967-68 produced over 6 million tons of cane, which, when processed into sugar and molasses was valued at 99 million dollars. Winter vegetables are the second most prominant crop of the Glades. During 1967-68, 24 thousand carloads of 20 types of vegetables were sold for almost 49 million dollars. Celery, sweet corn, radishes, escarole, endive and cabbage shipments constituted approximately 84% of the total value of Glades' vegetables. In addition to the cane and vegetables, the cattle industry is also important to the area.

Vegetables, dairy products, cut flowers and ornamentals, citrus and poultry products constitute the agricultural production of the farmlands on the east coast of the county. Winter vegetables are the dominant crop and of the 12 types raised, tomatoes, green peppers, beans, and sweet corn are the most important in terms of acreage and value. This county ranks first in the United States in acres of snap beans, and the Coast dominates the county's acreage in beans by a ratio of six to one.

Of the total agricultural labor force of 31,000 at the peak of the 1967-68 season, 8,000 workers were employed by farms on the Coast. The 6,000 migrant and 2,000 full-time workers earned wages amounting to 26½ million dollars; it is estimated that nearly 100 percent of these earnings were spent within the county.

PALM BEACH COUNTY LIBRARY

Increasing Role of Citrus in County's Agricultural Production

Prior to 1944 there were only 887 acres devoted to the commercial production of citrus. The years between 1944 and 1963 saw little annual change in this inventory, which had climbed to 1,956 acres in gradual increments over the 19 year period. In 1964, 158,000 trees were planted; followed by 360,000 in 1965; 573,000 in 1966; and 538,000 in 1967 – bringing the total tree inventory up to over 1¾ million trees, or over 11 times the number of citrus trees that existed in 1963, just four years earlier. Acreage underwent a similar change, rising to 17,342 acres. In terms of total trees, Palm Beach is still of relatively minor importance in the State, ranking 13th with approximately 2.5 percent of the total trees, as compared with citrus leaders, Lake and Polk Counties, which combined account for 29 percent of the State's total. In fact, citrus production is not a dominant commodity in Palm Beach County's own agricultural picture; 1967-68 sales amounted to approximately 3 million dollars, or slightly more than one percent of the total for all agricultural products.

The planting and citrus sales figures require some elaboration in order to clearly understand the position of citrus in this county. The increase in tree plantings in this area between 1964 and 1967 not only appears impressive when comparing the total tree inventory in Palm Beach County prior to 1964, but is particularly outstanding when compared with the State during the same time period. For example, in 1967 there were 589,000 trees set here, the third highest in the State after Martin and St. Lucie Counties, with 839,000 and 589,000 trees respectively. It is interesting to note that the recent citrus plantings have favored the more southerly counties of the State, that is, those south of the traditional citrus area. While increasing citrus demand and diminishing acreage in the central area has contributed in some part to this shift, the weather has played an extremely important role. During December 1962, a severe freeze hit Florida causing the most severe damage of the century, which added to damage done in freezes in 1949, 1950, and 1951, encouraged growers to seek more temperate climates.

Palm Beach County, while it does not have as ideal soil for citrus as exists in central Florida, does have adequate soil given proper treatment for fertilization and drainage. The drainage aspect is particularly important to the growth of citrus; water percolation rates of at least 2 inches per day are required to prevent root decay. In the sandy citrus soils of this county, extensive ditching must be done to achieve proper drainage.

The sales of citrus from this area show the crop to be of rather small value in comparison to the total agricultural output. The reason for this is that the sales figures are reflecting production of only a small portion, less than 10 percent, of the total trees. Citrus require about four years from time of planting before fruit is available, consequently, sales of citrus for 1968 were over two times the 1967 figure of 2¼ million dollars. Forecasts of citrus sales for 1975 and 1980 indicate citrus will triple and quadruple over the 1967 figure.

Outlook for Agricultural Activities

There are a number of factors which will affect the future development of agricultural activities in Palm Beach County. The following paragraphs describe those conditions which will have the most significant bearing – soil, government restrictions, development of new crops, pollution, mechanization, labor, and urban pressure.

Farming in this county is done on two general soil types, organic and sandy. The rich organic soil of the Glades is the result of eight to ten thousand years of buildup of decaying sawgrass and other vegetation in the Everglades. The primary advantage of this soil is that practically no treatment is required to support agriculture, thereby, reducing production cost and at the same time having increased production per acre. However, this soil is not without its problems. The major disadvantage is that the soil is compacting and decomposing through oxidation. Compaction reduces the capability of the soil to support certain crops and oxidation lowers the soil quality requiring more treatment and less intense production. Future farming of this soil will have to accept the fact that the soil quality is decreasing; more extensive treatment will be necessary; and the soil will probably become useless through depletion in 40 to 50 years from now. The sponginess of this soil creates another disadvantage of the organic soil since it requires specially designed heavy machinery and livestock cannot be confined to small areas because mud bogs soon develop.

The soil of the coastal area is sandy, but when heavily fertilized and treated for diseases is ideal for vegetable growing. The shallow character of this soil may affect expansion of citrus production since citrus trees have large root systems and require reasonably good drainage. This means the trees must be spaced wider than normal, consequently, reducing the trees per acre and possibly the yield per acre as compared with northern Florida counties.

Government restrictions in the form of sugar cane acreage allotments and the use of offshore labor have affected the sugar industry and may do so again. The 15% acreage cutback from 1965 levels for the 1969-70 season will probably not restrict production since higher yields are being experienced, but the restriction does create problems for the industry in future planning and in deciding what to do with the land taken out of production. During 1964-65, there was a ban placed on hiring foreign workers in order to encourage the use of domestic labor. This decision was rescinded when it became evident that domestic labor is unwilling to harvest cane, the task normally performed by offshore workers.

As the quality of the soil in the Glades deteriorates, it will be necessary to develop new breeds of crops, especially for vegetables such as tomatoes, lettuce, eggplant and peppers. The development of these new types is actually for different reasons. Tomato types are needed which are adaptable to mechanical harvesting, whereas, new eggplant breeds are required which are more disease resistant. Also, as more land is reclaimed from the 200,000 acres in the Everglades, new crops will be needed to absorb the increased production capacity.

Pollution problems are created by the smoke generated by the sugar mills (a problem which the mills are trying to solve) and by the aerial spraying of insecticides and other chemicals. Improved legislation and enforcement will be required to control air and water pollution as more urbanization takes place.

Increasing costs of production, and specifically the cost of labor, are forcing farmers to seek mechanical means of cultivation and harvesting of crops. Presently, radishes and snap beans are totally harvested by machine; celery and corn are partially harvested by machine; and sugar cane is cut entirely by hand. Farm equipment manufacturers and others are trying now to develop equipment which will take over the field work now performed by humans.

Closely tied to the problem of mechanization is the problem of labor. Rising wage rates have caused farmers to replace field workers with equipment, thus creating a demand for skilled machine operators and a surplus of unskilled field hands. Between 1965 and 1968, demand for unskilled labor decreased nearly 30 percent and the magnitude of this situation promises to increase. It may be possible to initiate programs in education, training, and evaluation of the migrants in order to undertake an industrial development program which would be keyed to attracting industries requiring numbers of relatively unskilled workers.

As the population of the area grows, there will be increasing pressure on the Coast to turn agricultural land into urban uses, and while it is unlikely that agricultural use can be retained in the long run, the transition should be orderly and programs designed to discourage premature urbanization. Refusal to rezone pockets of agricultural land to urban uses and refusal to extend services, such as streets, schools, water and sewer facilities into such areas would greatly discourage "leap frog" development of the coastal agricultural land. Further orderliness would be possible through taxation; purely agricultural lands would be taxed at a true agricultural value, while those lands contiguous to urban development would be encouraged into development via higher taxes and extension of services.

(This article is based on a technical paper on agriculture prepared as part of a total Population and Economic Study by Gould Associates, Atlanta.)

Suitability of Soils

Other than the coastal ridge lying immediately west of Lake Worth and the sandy beaches along the ocean, we would classify all of these eastern soils as poorly drained or imperfectly drained sands and loamy sands.

The eastern south end from immediately north of Boca Road, in the area of Power Line Road west to the water reservoir, has rock outcroppings and is highly alkaline. Crops on these soils need additional manganese and iron in their fertilizer program.

The rest of the Lake Worth Drainage District south of Lantana Road is acid and needs liming included in its fertilization programs. From Lantana Road north, most of the soils are alkaline. This area has either shell rock or a hard calcareous rock underlying the top soil. The above is purely general because lying within these types, we have variations. Some are of only an acre or so while others are larger. In very few areas do 10 to 20 acres run entirely to one soil type.

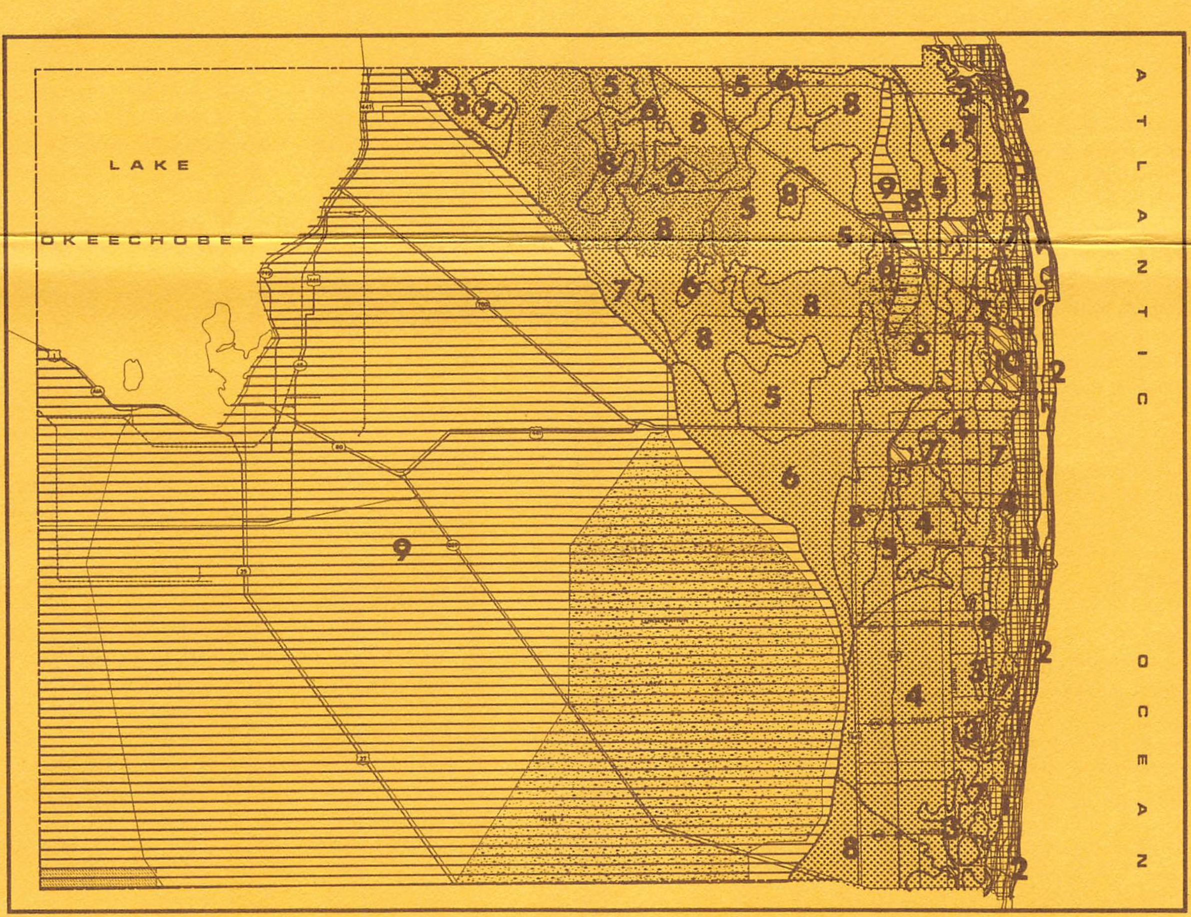
Each farmer and homeowner using any of our soils first needs to determine the depth of topsoil and kind of subsoil in order to know its potential best use. Many of our acid soils for instance, such as in the Lake Worth-Delray area, have a close hardpan within 3 feet of surface. This would mean that you get no drainage through the subsurface. It would also mean that it would certainly be an area unsuitable for homes that would be utilizing septic tanks. Soil types with shell underneath, on the other hand, or porous rock, would give you good subsoil drainage and would be suitable for homesites.

In farming, the hardpan soils have an advantage in that we do not have to pump as much water to raise a crop as we would on similar sands with a rock or shell subsoil.

All told, we have a conglomeration of poorly drained sands that need intensive management practices for their best utilization. They are warm and generally responsive to fertilizer and for these reasons work very well with our winter vegetable production.

Native growth, as a rule, can show you the land that has rock or shell rock underneath: Predominant pines with tall palmettos indicate acid soil, while land with cypress heads and outcroppings of cabbage palm is generally alkaline soil.

(This article was written by Robert Pryor, Palm Beach County Agricultural Agent.)



COASTAL RIDGES

1. ST. LUCIE - PAOLA ASSOCIATION: Nearly level and gently sloping excessively drained, deep, white and brownish-yellow, acid sandy soils on long narrow ridges and knolls.

2. PALM BEACH - COASTAL BEACH ASSOCIATION: Nearly level and gently sloping, well to excessively drained, neutral to calcareous, deep sandy and shelly soils, and adjacent more poorly drained sandy and shelly soils.

SANDY FLATLANDS

3. POMELLO - IMMOKALEE ASSOCIATION: Nearly level and gently sloping, moderately well drained, deep, nearly white, acid sandy soils with an organic pan on slightly elevated knolls and narrow ridges, and intervening flatlands of nearly level, poorly drained, acid sandy soils with an organic pan.

4. MYAKKA - BASINGER ASSOCIATION: Nearly level, poorly drained, acid sands with an organic pan on broad flatlands; interspersed with nearly level, poorly and very poorly drained, light and dark colored, deep sandy soils in sloughs and ponds.

5. WABASSO - FELDA ASSOCIATION: Nearly level, broad flatlands of poorly drained, moderately deep sandy soils with an organic pan over neutral to calcareous, loamy subsoils; interspersed with numerous sloughs and ponds of poorly and very poorly drained, moderately deep sandy soils with neutral to calcareous, loamy subsoils.

6. FELDA - ROCKLEDGE ASSOCIATION: Nearly level, broad, low wetlands of poorly, and very poorly drained, moderately deep and deep sandy soils with neutral to calcareous, loamy subsoils.

7. BASINGER - POMPANO ASSOCIATION: Nearly level, broad, low wetlands of poorly drained, acid to alkaline, deep sandy soils with an organic stained layer and similar soils lacking an organic stained layer.

8. BOCA - FELDA ASSOCIATION: Nearly level, broad, low flatlands of poorly drained, sandy soils shallow to moderately deep over limestone; interspersed with poorly and very poorly drained sandy soils over calcareous, loamy subsoils.

ORGANIC MARSHES

9. EVERGLADES - PAHOKEE ASSOCIATION: Broad, level marshlands with very poorly drained, neutral to alkaline, deep organic soils, and lesser areas of similar soils overlying limestone.

MISCELLANEOUS LAND AREAS

10. MADE LAND ASSOCIATION: Land areas where the soils have been sufficiently altered by excavation or by filling and smoothing as to render them unidentifiable as natural soil bodies.

Source: United States Department of Agriculture Soil Conservation Service.

AREA PLANNING BOARD

JOHN H. FLANCHER	CHAIRMAN COMMISSIONER DISTRICT 4
JOHN ADAIR, JR.	PALM BEACH COUNTY BOARD OF PUBLIC INSTRUCTION
G. E. DAIL, JR.	CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT
G. VANCE BIDDLE	COMMISSIONER DISTRICT 2
S. W. HOPKINS	COMMISSIONER DISTRICT 3
JEROME V. KELLY	COMMISSIONER DISTRICT 1
FRITZ STEIN, JR.	COMMISSIONER DISTRICT 5
D. O. MORGAN	DIRECTOR OF PLANNING

apb FORUM

NEWSLETTER OF THE AREA PLANNING BOARD OF PALM BEACH COUNTY - P. O. BOX 1548 - WEST PALM BEACH, FLORIDA, 33402